



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, D.C. 20555

ACNWS-0027
PDR
5-30-91

February 15, 1991

The Honorable Kenneth M. Carr
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Carr:

SUBJECT: SUMMARY REPORT - TWENTY SEVENTH MEETING OF THE ADVISORY
COMMITTEE ON NUCLEAR WASTE, JANUARY 23-25, 1991

During its 27th meeting, January 23-25, 1991, the Advisory
Committee on Nuclear Waste completed the activities noted below and
the following reports.

REPORTS

- Stringency of U.S. Environmental Protection Agency High-Level Radioactive Waste Repository Standards (Report to Chairman Carr, dated January 29, 1991.)

This report provides a more detailed basis for the statements, made in several previous ACNW reports, that the standards developed by EPA for a high-level radioactive waste (HLW) repository are overly stringent.

- Guidance on Limits on Doses and Risks to Individual Members of the Population (Report to Chairman Carr, dated January 29, 1991.)

This report provides clarification for the recommendation, made in several previous ACNW reports, that EPA consider incorporating some guidance related to limits on doses and risks to individual members of the general population into its high-level radioactive waste repository standards.

- Priority Issues on Radioactive Waste Management (Report to Chairman Carr, dated January 29, 1991.)

This report identifies the technical issues that the Committee believes deserve priority attention for the immediate future. The major issues include, standards and criteria for a HLW repository, site characterization of the HLW repository, and performance assessments for both the HLW repository and low-level radioactive waste (LLW) disposal facilities.

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HIGHLIGHTS OF MATTERS CONSIDERED BY THE COMMITTEE

• Regulation of Mixed Wastes

The Committee continued its deliberations on the technical and regulatory considerations for the disposal of mixed wastes. Additional information and advice on the comparability of NRC and EPA requirements were provided by representatives of the Environmental Protection Agency, National Institutes of Health, New England Nuclear, Lawrence Livermore National Laboratories, Savannah River Laboratory, and Oak Ridge National Laboratory.

The Committee discussed a proposed report to Chairman Carr regarding the regulation of mixed wastes and a memorandum to Mr. Robert Bernero related to additional observations on mixed wastes. The Committee plans to complete these reports during its February 21-22, 1991 meeting.

• Conformity of Guidance on Low-Level Waste Disposal Facilities with the Requirements of 10 CFR Part 61

The Committee was briefed by the NRC staff on the conformance of specific guidance to the provisions and requirements in the NRC regulations on low-level waste disposal (10 CFR Part 61). This briefing was for information only. No Committee action was taken.

• Trip Report of Recent Visit to the Barnwell Low-Level Waste Site

Drs. Pomeroy and Hinze briefed the Committee on their recent visit to the Chem-Nuclear low-level waste facility at Barnwell, South Carolina, and Chem-Nuclear's Environmental Laboratory.

• ACNW Future Activities

A. The Committee discussed the possibility of coordinated meetings with the Nuclear Waste Technical Review Board (NWTREB). Dr. Moeller will contact the Chairman of the NWTREB to discuss the possibility of coordinated sessions on items of mutual interest to both Committees.

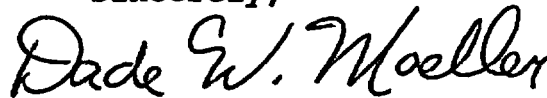
B. The Committee agreed to invite the low-level waste coordinator from Massachusetts to brief the Committee on the development of the state's strategic plan for low-level waste disposal. A briefing is planned for the near future.

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- C. The Committee reaffirmed its commitment to visit the Center for Nuclear Waste Regulatory Analyses in San Antonio, Texas, for an update on the Center's activities.
- D. The Committee discussed the annual NRC report on radioactive materials released from nuclear power plants (NUREG/CR-2907). Concern was expressed regarding the uniformity in monitoring and reporting releases. The Committee expressed interest in a briefing on this subject. A briefing is scheduled during the February 21-22, 1991 meeting.
- E. The members agreed to the following proposed dates for prescheduled meetings with the Commissioners:
 - March 22, 1991
 - June 20, 1991
 - October 24, 1991
- F. The Committee agreed to reschedule the next full Committee meeting to a new date of February 21-22, 1991.

Appendix A summarizes the proposed items for future meetings of the Committee and related Working Groups. This list includes items proposed by the Commissioners and NRC staff as well as ACNW members.

Sincerely,



Dade W. Moeller
Chairman

APPENDIX A. FUTURE AGENDA

28th ACNW Committee Meeting February 21-22, 1991 (Tentative Agenda)

Substantially Complete Containment Concept - The Committee will be briefed by the NRC staff and the Center for Nuclear Waste Regulatory Analyses staff on a technical feasibility study on the "substantially complete containment" concept. This briefing is for information only.

Expert Judgment - The Committee will discuss the insights gained from a recent ACNW Working Group meeting on how expert judgment can be used in conducting performance assessments used in the licensing of high-level waste and low-level waste repositories.

Subsystem Performance Requirements - The Committee will continue discussions on the conformance of the 10 CFR Part 60, high-level waste repository subsystem performance requirements with the EPA high-level waste standards.

Revisions to 10 CFR Part 20 - The Committee will be briefed on recent revisions to 10 CFR Part 20, "Standards for Protection Against Radiation." The focus will be on changes that effect requirements for waste disposal.

Annual Report on Radioactive Materials Released from Nuclear Power Plants - The Committee will be briefed by the NRC staff regarding the NRC staff report "Annual Report on Radioactive Materials Released from Nuclear Power Plants," (NUREG/CR-2907).

Carbon-14 Release and Migration - The Committee will continue its discussions on potential carbon-14 release and migration relative to a high-level waste repository.

Leaching Resistance of Waste Form - The Committee will respond to a recent Staff Requirements Memorandum (SRM) concerning revising Part 61 with regards to leaching resistance of the LLW form.

Human Intrusion - The Committee will continue its discussion of a report on human intrusion at a HLW repository and the lessons learned from the treatment of similar scenarios in nuclear power plant licensing.

Committee Activities - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organizational matters, as appropriate. The members will also discuss matters and specific issues that were not completed during previous meetings as time and availability of information permit.

Working Group Meetings (Dates to be determined)

Geologic Dating - The Working Group will review and discuss the problems and limitations associated with the various Quaternary dating methods to be used in site characterization of a HLW repository.

Integration of Geophysics into Site Characterization of a High-Level Waste Repository - The Working Group will focus on what geophysical testing can do to aid in the resolution of issues associated with potentially adverse conditions and will include a discussion of the DOE "white paper" on geophysical studies, NRC Site Characterization Analysis comments on the DOE geophysical testing program, geologic information needed for site characterization, and what specific geophysical methods may be most applicable.

Long-Term Climate Change - The Working Group will review and discuss potential long-range climate changes and their impact on performance assessments and ultimately on the suitability of the proposed HLW repository.